James Reid
Quality Frames, Inc.
28620 C.R. 20
Elkhart, IN 46517

Re: 039-11638-00215
First Significant Permit Revision to
FESOP No.: F039-7048-00215

Dear Mr. Reid:

Quality Frames, Inc. was issued a FESOP permit on March 4, 1997 for operation of a fabrication and surface coating operation for fifth wheel and travel trailer frames. A letter requesting changes to this permit was received on December 8, 1999. Pursuant to the provisions of 326 IAC 2-7-12 a significant permit modification to this permit is hereby approved as described in the attached Technical Support Document.

The following source and mailing address changes have been made to Section A.1 (new language has been **bolded** and old language ~~struck out~~):

A.1 General Information
The Permittee owns and operates a fabrication and surface coating operation for fifth wheel and travel trailer frames:

Responsible Official:	James Reid, President
Source Address:	28620 C.R. 20, Elkhart, Indiana ~~46514-0535~~ **46517**
Mailing Address:	~~P.O. Box 4535, Elkhart, Indiana 46514-0535~~ **28620 C.R. 20, Elkhart, IN 46517**
SIC Code:	3440
County Location:	Elkhart
County Status:	Maintenance for ozone, attainment for all other criteria pollutants
Source Status:	Synthetic Minor Source, FESOP Program

The emission unit description in Section A.2 has been revised to include the two (2) airless spray applicators and increase in maximum units per hour (new language has been **bolded** and old language ~~struck out~~):

A.2 Emission Units and Pollution Control Summary
The stationary source consists of the following emission units and pollution control devices:

(a) One (1) lean-to paint coating operation, identified as EU-01, including two (2) 7000 actual cubic feet per minute (acfm) exhaust fans, one (1) cup gun, ~~three (3)~~ **five (5)** airless spray applicators, and two overspray control filter chambers. The booth has a maximum capacity of ~~7.5~~ **10** units per hour, ~~101~~ **134.6** pounds of paint per hour, and 3 pounds of thinner per hour and exhausts through stacks S1 and S2.

The facility description in Section D.1 has been revised to include the two (2) airless spray applicators and increase in maximum units per hour. The VOC usage in Section D.1.1(c) has been changed to reflect the new VOC limitation (new language has been **bolded** and old language ~~struck out~~):

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:
One (1) lean-to paint coating operation, identified as EU-01, including two (2) 7000 actual cubic feet per minute (acfm) exhaust fans, one (1) cup gun, ~~three (3)~~ **five (5)** airless spray applicators, and two overspray control filter chambers. The booth has a maximum capacity of ~~7.5~~ **10** units per hour, ~~101~~ **134.6** pounds of paint per hour, and 3 pounds of thinner per hour and exhausts through stacks S1 and S2.
(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-8-4(1)] [326 IAC 8-2-9] [326 IAC 6]

D.1.1 Volatile Organic Compounds

(a) That pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations)~~, and CP-039-3361, issued on July 11, 1994,~~ the volatile organic compound (VOC) content of coatings applied to the fifth wheel and travel trailers shall be limited to 3.5 pounds of VOC per gallon of coating less water.

(b) That pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), solvent sprayed from the application equipment during clean up or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

(c) That the amount of volatile organic compounds (VOCs) delivered to the applicators plus the amount of VOCs used for clean-up shall not exceed ~~99.4~~ **90.35** tons per ~~365 consecutive day~~ **12 consecutive month** period. Compliance shall be demonstrated at the end of each ~~day~~ **month**, based on the total usage for the most recent ~~365 day~~ **12 month** period. Therefore, the requirements of 326 IAC 2-7 (Part 70), do not apply.

D.1.2 Hazardous Air Pollutants

That the hazardous air pollutant emissions shall be limited as follows:

(a) The amount of any single hazardous air pollutant (HAP) delivered to the applicators plus the amount of any single HAP used for clean-up shall not exceed ~~6.4~~ **9** tons per ~~365 consecutive day~~ **12 consecutive month** period. Compliance shall be demonstrated at the end of each ~~day~~ **month**, based on the total usage for the most recent ~~365 day~~ **12 month** period.

(b) The amount of any combination of HAPs delivered to the applicators plus the amount of any combination of HAPs used for clean-up shall not exceed ~~21.24~~ **19.81** tons per ~~365 consecutive day~~ **12 consecutive month** period. Compliance shall be demonstrated at the end of each ~~day~~ **month**, based on the total usage for the most recent ~~365 day~~ **12 month** period.

Therefore, the requirements of 326 IAC 2-7 (Part 70), do not apply.

Section D.3 has been revised as follows:

SECTION D.3 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:
One (1) touch-up booth, using spray cans, uncontrolled.
(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-8-4(1)] [326 IAC 8-2-9] [326 IAC 6]

D.3.1 Volatile Organic Compounds

(a) The VOCs delivered to the applicators of the touch-up booth shall not exceed ~~14 pounds per day~~ **8.65 tons per 12 consecutive month period.** ~~Therefore, the requirements of 326 IAC 8-2-9 will not apply to this booth.~~ **Compliance shall be demonstrated at the end of each month, based on the total usage for the most recent 12 month period. Therefore, the requirements of 326 IAC 2-7 (Part 70), do not apply.**

(b) That pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of coatings applied to the fifth wheel and travel trailers shall be limited to 3.5 pounds of VOC per gallon of coating less water.

That pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), solvent sprayed from the application equipment during clean up or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

D.3.2 Particulate Matter Overspray

This touch-up booth shall comply with 326 IAC 6-3-2 (c). Use the equation $E = 4.1 P^{0.67}$, where E is the emission rate in pounds per hour and P is the process weight in tons per hour.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.3.3 Quarterly Reporting

That a quarterly summary to document compliance with operation condition D.3.1 shall be submitted to the address listed in Section C - General Reporting Requirements, using the enclosed forms or their equivalents, within thirty (30) days after the end of the quarter being reported.

The touch up booth FESOP monthly report on page 29 of 30 of the FESOP has been deleted and replaced with a FESOP quarterly report which is sufficient to show compliance with the reporting requirements of 326 IAC 2-8.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION

FESOP Quarterly Report

Source Name: Quality Frames, Inc.
Source Address: 28620 C.R. 20, Elkhart, IN 46517
Mailing Address: 28620 C.R. 20, Elkhart, IN 46517
FESOP No.: FSPR039-11638-00215
Facility: Touch up booth
Parameter: VOC Usage
Limit: 8.65 tons per 12 consecutive month period

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

The surface coating FESOP monthly report on page 30 of 30 of the FESOP has been deleted and replaced with a FESOP quarterly report which is sufficient to show compliance with the reporting requirements of 326 IAC 2-8.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION

FESOP Quarterly Report

Source Name: Quality Frames, Inc.
Source Address: 28620 C.R. 20, Elkhart, IN 46517
Mailing Address: 28620 C.R. 20, Elkhart, IN 46517
FESOP No.: FSPR039-11638-00215
Facility: Surface coating operation (EU-01)
Parameter: VOC, Single HAP and Total HAP Usage
Limit: 90.35 tons VOC per 12 consecutive month period, 6.4 tons single HAP per 12 consecutive month period, 19.81 tons total HAPs per 12 consecutive month period.

YEAR: _____

Month	Column 1a	Column 1b	Column 1c	Column 2a	Column 2b	Column 2c	Column 1a + 2a	Column 1b + 2b	Column 1c + 2c
	VOC Usage This Month	Single HAP Usage This Month	Total HAP Usage This Month	VOC Usage Previous 11 months	Single HAP Usage Previous 11 months	Total HAP Usage Previous 11 Months	VOC Usage 12 Month Total	Single HAP Usage 12 Month Total	Total HAP Usage 12 Month Total
Month 1									
Month 2									
Month 3									

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

The following construction conditions are applicable to the proposed project:

1. General Construction Conditions
   The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Management (OAM).

2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

3. Effective Date of the Permit
   Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

4. Pursuant to 326 IAC 2-1.1-9 (Revocation), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

Pursuant to 326 IAC 2-8-11.1, this permit shall be revised by incorporating the significant permit revision into the permit. All other conditions of the permit shall remain unchanged and in effect. Please attach a copy of this modification and the following revised permit pages to the front of the original permit.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Nishat Hydari, at 973-575-2555 (ext. 3216) or 1-800-451-6027 press 0 and ask for extension 3-6878.

Sincerely,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Management

Attachments
NH/EVP
cc: File - Elkhart County
U.S. EPA, Region V
Elkhart County Health Department
Air Compliance Section Inspector - Greg Wingstrom
Compliance Data Section - Jerri Curless
Administrative and Development - Janet Mobley
Technical Support and Modeling - Michelle Boner

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) OFFICE OF AIR MANAGEMENT

Quality Frames, Incorporated
28620 C.R. 20
Elkhart, Indiana 46517

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-8 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: F039-7048-00215	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date: March 4, 1997

First Significant Permit Revision: FSPR039-11638-00215	Pages Affected: 4, 22, 26, 29, 30
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:

SECTION A SOURCE SUMMARY

A.1 General Information

The Permittee owns and operates a fabrication and surface coating operation for fifth wheel and travel trailer frames.

Responsible Official:	James Reid, President
Source Address:	28620 C.R. 20, Elkhart, Indiana 46517
Mailing Address:	28620 C.R. 20, Elkhart, Indiana 46517
SIC Code:	3440
County Location:	Elkhart
County Status:	Maintenance for ozone, attainment for all other criteria pollutants
Source Status:	Synthetic Minor Source, FESOP Program

A.2 Emission Units and Pollution Control Summary

The stationary source consists of the following emission units and pollution control devices:

(a) One (1) lean-to paint coating operation, identified as EU-01, including two (2) 7000 actual cubic feet per minute (acfm) exhaust fans, one (1) cup gun, five (5) airless spray applicators, and two overspray control filter chambers. The booth has a maximum capacity of 10 units per hour, 134.6 pounds of paint per hour, and 3 pounds of thinner per hour and exhausts through stacks S1 and S2.

A.3 Insignificant Activities

This stationary source also includes the following insignificant activities, as defined in 326 IAC 2-7-1(20):

(a) one natural gas-fired gas furnace, with a maximum heat input capacity of 0.4 million British thermal units per hour;

(b) one natural gas-fired air make-up unit, with a maximum heat input capacity of 0.88 million British thermal units per hour;

(c) two (2) infrared tube combustion units, each with a maximum heat input capacity of 0.1 million British thermal units per hour;

(d) Four (4) stick welding stations, with a maximum capacity of 13 pounds of wire per hour, using 6013 type of wire;

(e) Twenty-four (24) MIG welding stations, with a maximum capacity of 12.5 pounds of wire per hour, using 0.045 L-56 type of wire;

(f) paved and unpaved roads and parking lots with public access;

(g) vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids;

(h) application of oils, greases, lubricants or other nonvolatile materials applied as temporary protective coatings;

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:
One (1) lean-to paint coating operation, identified as EU-01, including two (2) 7000 actual cubic feet per minute (acfm) exhaust fans, one (1) cup gun, five (5) airless spray applicators, and two overspray control filter chambers. The booth has a maximum capacity of 10 units per hour, 134.6 pounds of paint per hour, and 3 pounds of thinner per hour and exhausts through stacks S1 and S2.
(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-8-4(1)] [326 IAC 8-2-9] [326 IAC 6]

D.1.1 Volatile Organic Compounds

(a) That pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations) the volatile organic compound (VOC) content of coatings applied to the fifth wheel and travel trailers shall be limited to 3.5 pounds of VOC per gallon of coating less water.

(b) That pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), solvent sprayed from the application equipment during clean up or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

(c) That the amount of volatile organic compounds (VOCs) delivered to the applicators plus the amount of VOCs used for clean-up shall not exceed 90.35 tons per 12 consecutive month period. Compliance shall be demonstrated at the end of each month, based on the total usage for the most recent 12 month period. Therefore, the requirements of 326 IAC 2-7 (Part 70), do not apply.

D.1.2 Hazardous Air Pollutants

That the hazardous air pollutant emissions shall be limited as follows:

(a) The amount of any single hazardous air pollutant (HAP) delivered to the applicators plus the amount of any single HAP used for clean-up shall not exceed 9 tons per 12 consecutive month period. Compliance shall be demonstrated at the end of each month, based on the total usage for the most recent 12 month period.

(b) The amount of any combination of HAPs delivered to the applicators plus the amount of any combination of HAPs used for clean-up shall not exceed 19.81 tons per 12 consecutive month period. Compliance shall be demonstrated at the end of each month, based on the total usage for the most recent 12 month period.

Therefore, the requirements of 326 IAC 2-7 (Part 70), do not apply.

D.1.3 Particulate Matter Overspray

That pursuant to CP-039-3361, issued on July 11, 1994, the dry filters shall be in operation at all times that the paint booth is in operation. The facility shall comply with 326 IAC 6-3-2 (c). Use the equation $E = 4.1\ P^{0.67}$, where E is the emission rate in pounds per hour and P is the process weight in tons per hour.

SECTION D.3 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:
One (1) touch-up booth, using spray cans, uncontrolled.
(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-8-4(1)] [326 IAC 8-2-9] [326 IAC 6]

D.3.1 Volatile Organic Compounds

(a) The VOCs delivered to the applicators of the touch-up booth shall not exceed 8.65 tons per 12 consecutive month period. Compliance shall be demonstrated at the end of each month, based on the total usage for the most recent 12 month period. Therefore, the requirements of 326 IAC 2-7 (Part 70), do not apply.

(b) That pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of coatings applied to the fifth wheel and travel trailers shall be limited to 3.5 pounds of VOC per gallon of coating less water.

That pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), solvent sprayed from the application equipment during clean up or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

D.3.2 Particulate Matter Overspray

This touch-up booth shall comply with 326 IAC 6-3-2 (c). Use the equation $E = 4.1 P^{0.67}$, where E is the emission rate in pounds per hour and P is the process weight in tons per hour.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.3.3 Quarterly Reporting

That a quarterly summary to document compliance with operation condition D.3.1 shall be submitted to the address listed in Section C - General Reporting Requirements, using the enclosed forms or their equivalents, within thirty (30) days after the end of the quarter being reported.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION

FESOP Quarterly Report

Source Name: Quality Frames, Inc.
Source Address: 28620 C.R. 20, Elkhart, IN 46517
Mailing Address: 28620 C.R. 20, Elkhart, IN 46517
FESOP No.: FSPR039-11638-00215
Facility: Touch up booth
Parameter: VOC Usage
Limit: 8.65 tons per 12 consecutive month period

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION

FESOP Quarterly Report

Source Name: Quality Frames, Inc.
Source Address: 28620 C.R. 20, Elkhart, IN 46517
Mailing Address: 28620 C.R. 20, Elkhart, IN 46517
FESOP No.: FSPR039-11638-00215
Facility: Surface coating operation (EU-01)
Parameter: VOC, Single HAP and Total HAP Usage
Limit: 90.35 tons VOC per 12 consecutive month period, 6.4 tons single HAP per 12 consecutive month period, 19.81 tons total HAPs per 12 consecutive month period.

YEAR: _____

Month	Column 1a	Column 1b	Column 1c	Column 2a	Column 2b	Column 2c	Column 1a + 2a	Column 1b + 2b	Column 1c + 2c
	VOC Usage This Month	Single HAP Usage This Month	Total HAP Usage This Month	VOC Usage Previous 11 months	Single HAP Usage Previous 11 months	Total HAP Usage Previous 11 Months	VOC Usage 12 Month Total	Single HAP Usage 12 Month Total	Total HAP Usage 12 Month Total
Month 1									
Month 2									
Month 3									

9 No deviation occurred in this quarter.
9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Indiana Department of Environmental Management
Office of Air Management

Technical Support Document (TSD) for a Significant Permit Revision to a Federally Enforceable Operating Permit (FESOP)

Source Background and Description

Source Name:	Quality Frames, Inc.
Source Location:	28620 CR 20, Elkhart, IN 46517
County:	Elkhart
SIC Code:	3440
Operation Permit No.:	F039-7048-00215
Operation Permit Issuance Date:	March 4, 1997
Significant Permit Review No.:	F039-11638-00215
Permit Reviewer:	Nishat Hydari

The Office of Air Management (OAM) has reviewed a FESOP application from Quality Frames, Inc. relating to the revision to the operation of a metal surface coating operation.

History

On December 8, 1999, Quality Frames, Inc. submitted an application to the OAM requesting significant revisions to their existing FESOP which was issued on March 4, 1997. The revisions include paint changes, maximum number of units per hour increase and addition of 2-spray guns.

New Emission Units and Pollution Control Equipment Receiving Prior Approval

The application includes information relating to the prior approval for the construction and operation of the following equipment pursuant to 326 IAC 2-8-4(11):

(a) Two (2) airless spray applicators, identified as Airless 004 and Airless 005 to be added to the one (1) lean-to paint coating operation, identified as EU-01.

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

(a) CP 039-3361-00215, issued on July 11, 1994; and

(b) F039-7048-00215, issued on March 4, 1997.

All conditions from previous approvals were incorporated into this FESOP.

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the revision to the FESOP be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An administratively complete FESOP application for the purposes of this review was received on December 8, 1999.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (Appendix A, pages 1 through 5).

Potential To Emit of Modification

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA."

Pollutant	Potential To Emit (tons/year)
PM	197.68
PM-10	197.68
SO_2	0.00
VOC	401.49
CO	0.00
NO_x	0.00

Note: For the purpose of determining Title V applicability for particulates, PM-10, not PM, is the regulated pollutant in consideration.

HAP's	Potential To Emit (tons/year)
Methyl Chloroform	3.99
Toluene	8.20
Methyl Ethyl Ketone	1.26
Methyl Isobutyl Ketone	1.26
Methanol	1.25
TOTAL	15.96

(a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of PM-10 and VOC are equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.

(b) Fugitive Emissions
Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

Justification for Modification

The Federally Enforceable State Operating Permit is being modified through a Significant Permit Revision for a Federally Enforceable State Operating Permit. This modification is being performed pursuant to 326 IAC 2.8-11.1(f).

Actual Emissions

The following table shows the actual emissions from the source. This information reflects the 1998 OAM emission data.

Pollutant	Actual Emissions (tons/year)
PM	0.41
PM-10	0.36
SO_2	0.00
VOC	37.36
CO	0.05
NO_x	0.25

County Attainment Status

The source is located in Elkhart County.

Pollutant	Status
PM-10	attainment
SO_2	attainment
NO_2	attainment
Ozone	maintenance
CO	attainment
Lead	attainment

(a) Volatile organic compounds (VOC) and oxides of nitrogen (NOx) are precursors for the formation of ozone. Therefore, VOC and NO_X emissions are considered when evaluating the rule applicability relating to the ozone standards. Elkhart County has been designated as maintenance attainment for ozone.

Limited Potential to Emit of Modification after Issuance

The table below summarizes the total potential to emit, reflecting all limits, of the significant emission units.

	Limited Potential to Emit (tons/year)							
Process/facility	PM	PM-10	SO_2	VOC	CO	NO_X	Single HAP	HAPs
Surface coating booth (EU-01)	0.98	0.98	0.00	90.35	0.00	0.00	6.40	19.81
Touch Up Booth	3.09	3.09	0.00	8.65	0.00	0.00	3.99	3.99
Total Emissions	4.07	4.07	0.00	99	0.00	0.00	6.40	23.80

Federal Rule Applicability

(a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.

(b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this source.

State Rule Applicability - Entire Source

326 IAC 2-6 (Emission Reporting)

This source is subject to 326 IAC 2-6 (Emission Reporting), because it has the potential to emit more than ten (10) tons per year of VOC. Pursuant to this rule, the owner/operator of the source must annually submit an emission statement for the source. The annual statement must be received by April 15 of each year and contain the minimum requirement as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8)(Emission Statement Operating Year).

326 IAC 5-1 (Visible Emissions Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) miute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability - Individual Facilities

326 IAC 8-2-9 (Miscellaneous Metal Coating)

Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of coating delivered to the two (2) airless spray applicators at the spray booth and the touch up booth shall be limited to 3.5 pounds of VOCs per gallon of coating less water, for forced warm air dried coatings.

Solvent sprayed from application equipment during cleanup or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

326 IAC 6-3-2 (Process Operations)

Pursuant to F039-7048-00215, issued on March 4, 1997, the particulate matter (PM) from the surface coating booth (EU-01) including the two (2) airless spray applicators shall be limited by the following:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10 P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

The dry filters shall be in operation at all times the surface coating booth (EU-01) is in operation, in order to comply with this limit.

Compliance Requirements

Permits issued under 326 IAC 2-8 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAM, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-8-4. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this source are as follows:

1. The surface coating process (including the touch up booth) has applicable compliance monitoring conditions as specified below:

   (a) Daily inspections shall be performed to verify the placement, integrity and particle loading of the filters. To monitor the performance of the dry filters, weekly observations shall be made of the overspray from the surface coating booth stacks (S1 and S2) while one or more of the booths are in operation. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

   (b) Monthly inspections shall be performed of the coating emissions from the stack and the presence of overspray on the rooftops and the nearby ground. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when a noticeable change in overspray emission, or evidence of overspray emission is observed. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit

   These monitoring conditions are necessary because the dry filters for the paint booths must operate properly to ensure compliance with 326 IAC 6-3 (Process Operations) and 326 IAC 2-8 (FESOP).

Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 188 hazardous air pollutants (HAPs) set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Management (OAM) FESOP Application Form GSD-08.

(a) This source will emit levels of air toxics less than those which constitute a major source according to Section 112 of the 1990 Clean Air Act Amendments.

(b) See attached calculations for detailed air toxic calculations (Appendix A, pages 4 and 5).

Changes Proposed

The following source and mailing address changes have been made to Section A.1:

A.1 General Information
The Permittee owns and operates a fabrication and surface coating operation for fifth wheel and travel trailer frames:

Responsible Official:	James Reid, President
Source Address:	28620 C.R. 20, Elkhart, Indiana ~~46514-0535~~ **46517**
Mailing Address:	~~P.O. Box 4535, Elkhart, Indiana 46514-0535~~ **28620 C.R. 20, Elkhart, IN 46517**
SIC Code:	3440
County Location:	Elkhart
County Status:	Maintenance for ozone, attainment for all other criteria pollutants
Source Status:	Synthetic Minor Source, FESOP Program

The emission unit description in Section A.2 has been revised to include the two (2) airless spray applicators and increase in maximum units per hour.

A.2 Emission Units and Pollution Control Summary
The stationary source consists of the following emission units and pollution control devices:

(a) One (1) lean-to paint coating operation, identified as EU-01, including two (2) 7000 actual cubic feet per minute (acfm) exhaust fans, one (1) cup gun, ~~three (3)~~ **five (5)** airless spray applicators, and two overspray control filter chambers. The booth has a maximum capacity of ~~7.5~~ **10** units per hour, ~~101~~ **134.6** pounds of paint per hour, and 3 pounds of thinner per hour and exhausts through stacks S1 and S2.

The facility description in Section D.1 has been revised to include the two (2) airless spray applicators and increase in maximum units per hour. The VOC usage in Section D.1.1(c) has been changed to reflect the new VOC limitation.

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:
One (1) lean-to paint coating operation, identified as EU-01, including two (2) 7000 actual cubic feet per minute (acfm) exhaust fans, one (1) cup gun, ~~three (3)~~ **five (5)** airless spray applicators, and two overspray control filter chambers. The booth has a maximum capacity of ~~7.5~~ **10** units per hour, ~~101~~ **134.6** pounds of paint per hour, and 3 pounds of thinner per hour and exhausts through stacks S1 and S2.
(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-8-4(1)] [326 IAC 8-2-9] [326 IAC 6]

D.1.1 Volatile Organic Compounds

(a) That pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations)~~, and CP-039-3361, issued on July 11, 1994,~~ the volatile organic compound (VOC) content of coatings applied to the fifth wheel and travel trailers shall be limited to 3.5 pounds of VOC per gallon of coating less water.

(b) That pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), solvent sprayed from the application equipment during clean up or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

(c) That the amount of volatile organic compounds (VOCs) delivered to the applicators plus the amount of VOCs used for clean-up shall not exceed ~~99.4~~ **90.35** tons per ~~365 consecutive day~~ **12 consecutive month** period. Compliance shall be demonstrated at the end of each ~~day~~ **month**, based on the total usage for the most recent ~~365 day~~ **12 month** period. Therefore, the requirements of 326 IAC 2-7 (Part 70), do not apply.

D.1.2 Hazardous Air Pollutants

That the hazardous air pollutant emissions shall be limited as follows:

(a) The amount of any single hazardous air pollutant (HAP) delivered to the applicators plus the amount of any single HAP used for clean-up shall not exceed 6.4 tons per ~~365 consecutive day~~ **12 consecutive month** period. Compliance shall be demonstrated at the end of each ~~day~~ **month**, based on the total usage for the most recent ~~365 day~~ **12 month** period.

(b) The amount of any combination of HAPs delivered to the applicators plus the amount of any combination of HAPs used for clean-up shall not exceed ~~21.24~~ **19.81** tons per ~~365 consecutive day~~ **12 consecutive month** period. Compliance shall be demonstrated at the end of each ~~day~~ **month**, based on the total usage for the most recent ~~365 day~~ **12 month** period.

Therefore, the requirements of 326 IAC 2-7 (Part 70), do not apply.

Section D.3 has been revised as follows:

SECTION D.3 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:
One (1) touch-up booth, using spray cans, uncontrolled.
(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-8-4(1)] [326 IAC 8-2-9] [326 IAC 6]

D.3.1 Volatile Organic Compounds

(a) The VOCs delivered to the applicators of the touch-up booth shall not exceed ~~14 pounds per day~~ **8.65 tons per 12 consecutive month period.** ~~Therefore, the requirements of 326 IAC 8-2-9 will not apply to this booth.~~ **Compliance shall be demonstrated at the end of each month, based on the total usage for the most recent 12 month period. Therefore, the requirements of 326 IAC 2-7 (Part 70), do not apply.**

(b) **That pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of coatings applied to the fifth wheel and travel trailers shall be limited to 3.5 pounds of VOC per gallon of coating less water.**

That pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), solvent sprayed from the application equipment during clean up or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

D.3.2 Particulate Matter Overspray

This touch-up booth shall comply with 326 IAC 6-3-2 (c). Use the equation $E = 4.1 P^{0.67}$, where E is the emission rate in pounds per hour and P is the process weight in tons per hour.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.3.3 Quarterly Reporting

That a quarterly summary to document compliance with operation condition D.3.1 shall be submitted to the address listed in Section C - General Reporting Requirements, using the enclosed forms or their equivalents, within thirty (30) days after the end of the quarter being reported.

The touch up booth FESOP monthly report on page 29 of 30 of the FESOP has been deleted and replaced with a FESOP quarterly report which is sufficient to show compliance with the reporting requirements of 326 IAC 2-8.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION

FESOP Quarterly Report

Source Name: Quality Frames, Inc.
Source Address: 28620 C.R. 20, Elkhart, IN 46517
Mailing Address: 28620 C.R. 20, Elkhart, IN 46517
FESOP No.: FSPR039-11638-00215
Facility: Touch up booth
Parameter: VOC Usage
Limit: 8.65 tons per 12 consecutive month period

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

The surface coating FESOP monthly report on page 30 of 30 of the FESOP has been deleted and replaced with a FESOP quarterly report which is sufficient to show compliance with the reporting requirements of 326 IAC 2-8.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION

FESOP Quarterly Report

Source Name: Quality Frames, Inc.
Source Address: 28620 C.R. 20, Elkhart, IN 46517
Mailing Address: 28620 C.R. 20, Elkhart, IN 46517
FESOP No.: FSPR039-11638-00215
Facility: Surface coating operation (EU-01)
Parameter: VOC, Single HAP and Total HAP Usage
Limit: 90.35 tons VOC per 12 consecutive month period, 6.4 tons single HAP per 12 consecutive month period, 19.81 tons total HAPs per 12 consecutive month period.

YEAR: _____

Month	Column 1a	Column 1b	Column 1c	Column 2a	Column 2b	Column 2c	Column 1a + 2a	Column 1b + 2b	Column 1c + 2c
	VOC Usage This Month	Single HAP Usage This Month	Total HAP Usage This Month	VOC Usage Previous 11 months	Single HAP Usage Previous 11 months	Total HAP Usage Previous 11 Months	VOC Usage 12 Month Total	Single HAP Usage 12 Month Total	Total HAP Usage 12 Month Total
Month 1									
Month 2									
Month 3									

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Conclusion

The operation of this modification to a metal surface coating operation shall be subject to the conditions of the attached proposed **Significant Permit Revision for a Federally Enforceable State Operating Permit No.: F039-11638-00215.**

Indiana Department of Environmental Management
Office of Air Management

Addendum to the
Technical Support Document for a Permit Revision to a Federally Enforceable State Operating Permit

Source Name: **Quality Frames, Inc.**
Source Location: **28620 C.R. 20, Elkhart, IN 46517**
SIC Code: **3440**
County: **Elkhart**
Operation Permit No.: **FSPR 039-11638-00215**
Permit Reviewer: **Nishat Hydari/EVP**

On February 7, 2000, the Office of Air Management (OAM) had a notice published in the Elkhart Truth, Elkhart, Indiana, stating that Quality Frames, Inc. had applied for a Significant Permit Revision to its Federally Enforceable State Operating Permit (FESOP) for the addition of 2 spray guns to its metal surface coating operation. The notice also stated that OAM proposed to issue a FESOP Significant Permit Revision for this operation and provided information on how the public could review the proposed FESOP and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this FESOP should be issued as proposed.

On March 17, 2000, Ray Romberger from Romcraft, Inc. submitted comments on behalf of Quality Frames, Inc. on the proposed FESOP Significant Permit Revision. The summary of the comments and corresponding responses is as follows (bolded language has been added, the language with a line through it has been deleted):

Comment # 1

Please change the amount of VOC used in Section D.1.1(c) of the permit and the TSD to read 99.4 tons per year for clean up solvent, touch up paint operations and applicators plant wide.

Response # 1

This source, otherwise required to obtain a Title V permit, has agreed to accept a permit with federally enforceable limits that restrict its PTE of VOCs to below the Title V emission levels (100 tons per year). The potential to emit of VOCs of the touch up booth is 8.65 tons per year. In order to ensure that they are in compliance with the FESOP rule, the PTE of the lean-to paint coating operation (EU-01) is limited to 90.35 tons per year (8.65 tons/yr + 90.35 tons/yr = 99 tons/yr). No changes have been made to this permit or the TSD as a result of this comment.

Comment # 2

Please change the amount of single HAP used in Section D.1.2(a) of the permit and the TSD to read 9 tons per year plant wide.

Response # 2

The following changes have been made to Section D.1.2(a) in the permit.

D.1.2 Hazardous Air Pollutants
That the hazardous air pollutant emissions shall be limited as follows:

(a) The amount of any single hazardous air pollutant (HAP) delivered to the applicators plus the amount of any single HAP used for clean-up shall not exceed ~~6.4~~ **9** tons per 12 consecutive month period. Compliance shall be demonstrated at the end of each month, based on the total usage for the most recent 12 month period.

The following revisions have been made to Section D.1.2 (a) under Changes Proposed in the TSD (**bolded** language has been added, the language with a ~~line~~ through it has been deleted). The OAM prefers that the Technical Support Document reflect the permit that was on public notice. Changes to the permit or technical support material that occur after the public notice are documented in this Addendum to the Technical Support Document. This accomplishes the desired result of ensuring that these types of concerns are documented and part of the record regarding this permit decision.

D.1.2 Hazardous Air Pollutants
That the hazardous air pollutant emissions shall be limited as follows:

(a) The amount of any single hazardous air pollutant (HAP) delivered to the applicators plus the amount of any single HAP used for clean-up shall not exceed ~~6.4~~ **9** tons per ~~365 consecutive day~~ **12 consecutive month** period. Compliance shall be demonstrated at the end of each ~~day~~ **month**, based on the total usage for the most recent ~~365 day~~ **12 month** period.

Comment # 3

Please change the amount of combination HAPs used in Section D.1.2(b) of the permit and the TSD to read 24 tons per year plant wide.

Response # 3

The potential to emit combination HAPs from the touch up booth is 3.99 tons per year and 0.20 tons/yr from the welding operation (listed in F039-7048-00215). In order to stay below the major levels for combination HAPs (25 tons per year) the lean-to paint coating operation (EU-01) is limited to 19.81 tons per year (3.99 tons/yr + 0.20 tons/yr + 19.81 tons/yr = 24 tons/yr). No changes have been made to the permit as a result of this comment.

Comment # 4

We would like all reporting to be based on a 12 month period, not a rolling 365 day period. All reports to be submitted quarterly.

Response # 4

The reporting is based on a 12 month period and the reports are required to be submitted quarterly. Please refer to the two (2) report forms on pages 29 and 30 of the permit. No changes were made to this permit as a result of this comment.

Comment # 5

We request a combination 99.4 tons per year plant wide VOC limit to reduce our record keeping and reporting time.

Response # 5

Quality Frames, Inc. has accepted a permit with federally enforceable limits that restrict its PTE of VOCs to less than 100 tons per year. The PTE of the entire source is 99 tons per year (8.65 tons per year from the touch up booth + 90.35 tons per year from the lean-to paint coating operation (EU-01)). No changes were made to the permit as a result of this comment.

Appendix A: Emission Calculations

Company Name: Quality Frames, Inc.
Address City IN Zip: 28620 CR 20, Elkhart, IN 46517
CP: 039-11638
Plt ID: 039-00215
Reviewer: Nishat Hydari

Uncontrolled Potential Emissions (tons/year)

	Emissions Generating Activity		
Pollutant	Surface Coating	Insignificant Activity Touch Up Booth	**TOTAL**
PM	194.59	3.09	197.68
PM10	194.59	3.09	197.68
SO2	0.00	0.00	0.00
NOx	0.00	0.00	0.00
VOC	392.84	8.65	401.49
CO	0.00	0.00	0.00
total HAPs	11.97	3.99	15.96
worst case single HAP	8.20	3.99	8.20
Total emissions based on rated capacity at 8,760 hours/year.			

Controlled Potential Emissions (tons/year)

	Emissions Generating Activity		
Pollutant	Surface Coating	Insignificant Activity Touch Up Booth	**TOTAL**
PM	0.98	3.09	4.07
PM10	0.98	3.09	4.07
SO2	0.00	0.00	0.00
NOx	0.00	0.00	0.00
VOC	90.35	8.65	99.00
CO	0.00	0.00	0.00
total HAPs	19.81	3.99	23.80
worst case single HAP	6.40	3.99	6.40
Total emissions based on rated capacity at 8,760 hours/year, after control.			

Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations

Company Nai Quality Frames, Inc.
Address City 28620 C.R. 20, Elkhart, IN 46517
CP: 039-11638
Plt ID: 039-00215
Reviewer: Nishat Hydari

Material	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency
5769 Black Acrylic Enamel	10.08	34.60%	0.0%	34.6%	0.0%	65.00%	1.30000	10.000	3.49	3.49	45.34	1088.16	198.59	93.84	5.37	75%
AWS-3313 Grey Epoxy Paint	11.30	31.00%	0.0%	31.0%	0.0%	68.00%	1.18000	10.000	3.50	3.50	41.34	992.05	181.05	100.75	5.15	75%
Pure Grade Lacquer Thinner (0	7.01	100.00%	0.0%	100.0%	0.0%	0.00%	0.43000	1.000	7.01	7.01	3.01	72.34	13.20	0.00	ERR	0%
State Potential Emissions			**Add worst case coating to all solvents**								**89.69**	**2152.55**	**392.84**	**194.59**		

Controlled Potential Emissions

	Material Usage Limitation	Control Efficiency: VOC	Control Efficiency: PM	Controlled VOC lbs per Hour	Controlled VOC lbs per Day	Controlled VOC tons per Year	Controlled PM tons/yr
Total Controlled Potential Emissions:	25.20%	0.00%	98.00%	**22.60**	**542.44**	**99.00**	**0.98**

* Usage rate is 3 pounds per hour, which is equal to .43 gal/hr
Note: At a 25.20% annual material usage limitation, VOC emissions are limited to less than 100 tons per year, therefore, 326 IAC 2-7 does not apply.

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Total = Worst Coating + Sum of all solvents used

Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations
(Touch Up Booth)

Company Nai Quality Frames, Inc.
Address City 28620 CR 20, Elkhart, IN 46517
CP: 039-11638
Plt ID: 039-00215
Reviewer: Nishat Hydari

Material	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency
3669 AP060 Gloss Black S	6.7	73.70%	0.0%	73.7%	0.0%	25.00%	0.04000	10.000	4.94	4.94	1.98	47.40	8.65	3.09	19.75	0%

State Potential Emissions **Add worst case coating to all solvents** **1.98** **47.40** **8.65** **3.09**

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Total = Worst Coating + Sum of all solvents used

Appendix A: Emission Calculations
HAP Emission Calculations

Company Name Quality Frames, Inc.
Address City IN 28620 CR 20, Elkhart, IN 46517
CP#: 039-11638
Plt ID: 039-00215
Permit Reviewe Nishat Hydari

Material	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour	Weight % Toluene	Weight % Methyl Ethyl Ket	Weight % Methyl Isobutyl Keto	Weight % Methanol	Toluene Emissions (ton/yr)	Methyl Ethyl Ketone Emissions (ton/yr)	Methly Isobutyl Ketone Emissions (ton/yr)	Methanol Emissions (ton/yr)
Pure Grade Lacquer Thinner	7.01	0.430000	1.00	62.11%	9.57%	9.53%	9.45%	8.20	1.26	1.26	1.25
Total State Potential Emissions								**8.20**	**1.26**	**1.26**	**1.25**

* Usage rate is 3 pounds per hour, which is equal to .43 gal/hr

METHODOLOGY

HAPS emission rate (tons/yr) = Density (lb/gal) * Gal of Material (gal/unit) * Maximum (unit/hr) * Weight % HAP * 8760 hrs/yr * 1 ton/2000 lbs

HAP emissions with material usage limitation

Material	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour	Weight % Toluene	Weight % Methyl Ethyl Ket	Weight % Methyl Isobutyl Keto	Weight % Methanol	Material Usage Limitation	Toluene Emissions (ton/yr)	Methyl Ethyl Ketone Emissions (ton/yr)	Methly Isobutyl Ketone Emissions (ton/yr)	Methanol Emissions (ton/yr)
Pure Grade Lacquer Thinner	7.01	0.430000	1.00	62.11%	9.57%	9.53%	9.45%	25.20%	2.07	0.32	0.32	0.31
Total State Potential Emissions									**2.07**	**0.32**	**0.32**	**0.31**

* Usage rate is 3 pounds per hour, which is equal to .43 gal/hr

METHODOLOGY

HAPS emission rate (tons/yr) = Density (lb/gal) * Gal of Material (gal/unit) * Maximum (unit/hr) * Weight % HAP * 8760 hrs/yr * 1 ton/2000 lbs * Material Usage Limitation (%)

Appendix A: Emission Calculations
HAP Emission Calculations
(Touch Up Booth)

Company Quality Frames, Inc.
Address C 28620 CR 20, Elkhart, IN 46517
CP#: 039-11638
Plt ID: 039-00215
Permit Re Nishat Hydari

Material	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour	Weight % Methyl Chlorofor	Methyl Chloroform Emissions (ton/yr)
3669 AP060 Gloss Black	6.7	0.040000	10.00	34.00%	3.99

Total State Potential Emissions **3.99**

METHODOLOGY

HAPS emission rate (tons/yr) = Density (lb/gal) * Gal of Material (gal/unit) * Maximum (unit/hr) * Weight % HAP * 8760 hrs/yr * 1 ton/2000 lbs